

U.S. Application No.: 10/619,729  
AMENDMENT A

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**IN THE CLAIMS:**

Claims 1-31 (Canceled)

32. (Previously presented) A method for maintaining a healthy bone structure, said method comprising administering to a patient a bone health promoting effective amounts of a medicament containing 1-amino-3-(N,N-dimethylamino)-propylidene-1,1-bisphosphonic acid, any of its soluble salts or any of its hydrates.

33. (previously presented) A method as in claim 32, wherein the medicament is administed to a healthy patient.

34. (previously presented) A method as in claim 32, whrein the medicament is administed to a patient without osteopathies.

35. (previously presented) A method as in claim 32, wherein the medicament is administered to a human being or a vertebrate animal.

36. (previously presented) A method as in claim 32, wherein the medicament is adminstered to a human being at or above the age of 40 years.

37. (previously presented) A method as in claim 32, wherein the medicament is administered to a child.

38. (previously presented) A method for prevention of osteopathies in a healthy patient, said method comprising administering to a healthy patient an osteopathy preventing effective amount  
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of a medicament containing 1-amino-3-(N,N-dimethylamino) – propylidene -1,1-bisphosphonic acid, any of its soluble salts, or any of this hydrates.

39. (previously presented) A method according to claim 38, wherein the osteopathy is selected from the group comprising osteoporosis, Paget's disease, arthritis, periodontal osteopenia, adolescent scoliosis, fracture, disuse osteopenia, post-transplant osteopenia, hyperparathyroidism-associated, metabolic bone disease, osteopenia of prematurity and ossification disorder.

40. (previously presented) A method for treatment of a patient who has recently undergone treatment with corticosteroids, said method comprising administering to said patient a health promoting effective amount of a medicament containing 1-amino-3-(N,N-dimethylamino)-propylidene-1,1-bisphosphonic acid, any of its soluble salts or any of its hydrates.

41. (previously presented) A method for post-treatment of osteopathies wherein an anti-resorptive activity is not desired, said method comprising administering to a patient in need thereof a medicament containing 1-amino-3-(N,N-dimethylamino)-propylidene-1,1-bisphosphonic acid, any of its soluble salts or any of its hydrates.

42. (previously presented) A method for combating bone disease in a child, said method comprising administering to said child a health promoting effective amount of a medicament comprising 1-amino-3-(N,N-dimethylamino) –propylidene-1,1-bisphosphonic acid, any of its soluble salts or any of its hydrates.

43. (previously presented) A method according to claim 42, wherein the bone disease is selected from the group comprising osteoporosis, Paget's disease, arthritis, periodontal osteopenia, adolescent scoliosis, fracture, disuse osteopenia, post-transplant osteopenia, hyper-

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parathyroidism-associated osteopenia, drug-induced osteopenia, nutritional osteopenia, metabolic bone disease, osteopenia of prematurity and ossification disorder.

44. (previously presented) A method as in claim 42, wherein after the administration of medicament to the patient – the 1-amino-3- (N,N-dimethylamino) – propylidene-1,1-bisphosphonic acid, or any of its soluble salts or any of its hydrates are present at extracellular concentrations in a range of between  $10^{-6}$ M and  $10^{-10}$ M.

45. (previously presented) A method according to claim 44, wherein 1-amino-3- (N,N-dimethylamino) – propylidene-1,1-bisphosphonic acid, or any of its soluble salts or any of its hydrates, are present at extracellular concentrations in a range of between  $10^{-7}$ M and  $10^{-9}$ M.

46. (previously presented) A method according to claim 44, wherein 1-amino-3- (N,N-dimethylamino) – propylidene-1,1-bisphosphonic acid, or any of its soluble salts or any of its hydrates, are present at an extracellular concentration of about  $10^{-8}$ M.

47. (previously presented) A method for stimulation of those signaling cascades and reaction mechanisms mediating the action of 1-amino-3-(N,N-dimethylamino) – propylidene-1,1-bisphosphonic acid, or any of its soluble salts or any of its hydrates, which can be blocked by  $\text{Ca}^{2+}$ -channel blockers, said method comprising administration of stimulating effective amount of a medicament comprising 1-amino-3-(N,N-dimethylamino) – propylidene-1,1-bisphosphonic acid, or any of its soluble salts or any of its hydrates.

48. (previously presented) A method according to claim 47, wherein the  $\text{Ca}^{2+}$ -channel blockers are selected from the group comprising nifedipine and verapamil.

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49. (previously presented) A method according to claim 47, wherein 1-amino-3-(N,N-dimethylamino) – propylidene-1,1-bisphosphonic acid, any of its soluble salts or any of its hydrates, is administered in doses of 0.01 to 1000 mg/oral application.

50. (previously presented) A method according to claim 49, wherein 1-amino-3-(N,N-dimethylamino) – propylidene-1,1-bisphosphonic acid, any of its soluble salts or any of its hydrates, is administered in doses of 12.5 to 75 mg/oral application.

51. (previously presented) A method according to claim 49, wherein 1-amino-3-(N,N-dimethylamino) – propylidene-1,1-bisphosphonic acid, any of its soluble salts or any of its hydrates, is administered in doses of 0.02 to 200 mg/parenteral application.

52. (previously presented) A method according to claim 51, wherein 1-amino-3-(N,N-dimethylamino) – propylidene-1,1-bisphosphonic acid, any of its soluble salts or any of its hydrates, is administered in doses of 2.5 to 15 mg/parenteral application.

53. (previously presented) A medicament for mobilization of  $\text{Ca}^{2+}$ -ions from  $\text{IP}_3$ -sensitive stores, said method comprising administering a  $\text{Ca}^{2+}$ -ion mobilizing effective amount of a medicament comprising 1-amino-3-(N,N-dimethylamino) – propylidene-1,1-bisphosphonic acid, any of its soluble salts or any of its hydrates.

54. (previously presented) A method for prevention or treatment of bone disorder, said method comprising administering to a patient a medication comprising (a) 1-amino-3-(N,N-dimethylamino) – propylidene-1,1-bisphosphonic acid, any of its soluble salts or any of its hydrates, and (b) at least one substance selected from the group consisting of calcium salts, calcium citrate, calcium carbonate, other amino-substituted bisphosphonates, pharmaceutically active fluorine-containing salts, vitamins of the D-Group and their metabolites, cholecalciferol,

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calcifediol, calcitriol, ergocalciferol, PTH, anabolic hormones, estrogens, substances with estrogenic activity on the bone, progestogens, androgens, growth hormones, peptides with growth hormone activity, selective modulators of the estrogenic receptor, and raloxifene.

55. (previously presented) A method for screening the  $\text{Ca}^{2+}$ -channel blockers comprising the steps:

- treatment of cells having  $\text{Ca}^{2+}$ -channels with a putative  $\text{Ca}^{2+}$ -channel blocker;
- contacting the cells with 1-amino-3-(N,N-dimethylamino) – propylidene-1,1-bisphosphonic acid, any of its soluble salts or any of its hydrates;
- measuring a response as a result of the contacting step.

56. (withdrawn) A method for screening for functional analogues of 1-amino-3-(N,N-dimethylamino) – propylidene-1,1-bisphosphonic acid, any of its soluble salts or any of its hydrates, comprising the steps:

- treatment of cells having  $\text{Ca}^{2+}$ -channels with  $\text{Ca}^{2+}$ -channel blockers;
- contacting the cells with the putative functional analogue which, in the absence of any  $\text{Ca}^{2+}$ -channel blockers, is known to cause a  $\text{Ca}^{2+}$ -ion influx into the cells;
- measuring a response as a result of the contacting step.

57. (withdrawn) A method for the selective modulation of osteoblasts and/or for the maintenance of a healthy bone structure and/or for the treatment of patients who have recently undergone treatment with corticosteroids, and/or for post-treatment of osteopathies where an anti-resorptive activity is not desired, and/or for the stimulation of those signaling cascades and reaction mechanisms mediating the action of 1-amino-3-(N,N-dimethylamino) – propylidene-1,1-bisphosphonic acid, any of its soluble salts or any of its hydrates, which can be blocked by

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Ca<sup>2+</sup>-channel blockers, and/or for the mobilization of Ca<sup>2+</sup>-ions from IP<sub>3</sub>-sensitive stores, comprising:

administering 1-amino-3-(N,N-dimethylamino) – propylidene-1,1-bisphosphonic acid, any of its soluble salts or any of its hydrates along or in combination with a pharmaceutical carrier to a patient, the 1-amino-3-(N,N-dimethylamino) – propylidene-1,1-bisphosphonic acid, any of its soluble salts or any of its hydrates being administered in doses of 0.1 to 1000 mg/oral application or 0.02 to 200 mg/parenteral application.

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